<u>**AMENDMENTS TO THE CLAIMS**</u>

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1.   (Currently Amended)   A computer-implemented method of obtaining a motion of a mobile body on which a camera is mounted, using images of a surrounding of the mobile body captured by the camera, comprising:

a corresponding point calculation step of obtaining a plurality of corresponding points from two of the images having different capturing times;

a first motion calculation step of obtaining a first motion indicating the motion of the mobile body using the plurality of corresponding points, assuming a predetermined plane in the images; and

a second motion calculation step of obtaining a second motion indicating the motion of the mobile body using the first motion and the plurality of corresponding points,

wherein the first motion calculation step comprises:

a first step of selecting q (where q is an integer of two or more) partial corresponding point sets each composed of m (where m is an integer of 3 or more) corresponding points from the plurality of corresponding points;

a second step of calculating a candidate for the motion of the mobile body from each of the q partial corresponding point sets selected in the first step with a plane expression defining the plane; and

a third step of evaluating the q motion candidates calculated in the second step with a predetermined evaluation technique, and based on a result of the evaluation, specifying the first motion.

2.   (Original) The method of claim 1, wherein the plane is a road surface, a ceiling surface, or a wall surface.

3.   (Original) The method of claim 1, wherein, in the first motion calculation step, the first motion is calculated using three of the corresponding points.

4.   (Original) The method of claim 1, wherein the first motion calculation step comprises a step of updating a plane expression defining the plane using the first or second motion which has been previously obtained.

5.   (Cancelled)

6.   (Currently Amended) The method of claim [[5]] 1, wherein the first motion calculation step comprises a step of calculating a corresponding static point ratio which is a ratio of a corresponding static point or points using the plurality of corresponding points and the first or second motion which has been previously obtained; and

in the third step, the calculated corresponding static point ratio is used for evaluation to specify the first motion.

7. (Currently Amended) The method of claim [[5]] 1, wherein the first motion calculation step comprises a step of obtaining a predicted value of the motion of the mobile body from the first or second motion which has been previously obtained; and

in the third step, the first motion is specified, taking the predicted value into consideration.

8. (Original) The method of claim 1, wherein in the second motion calculation step, the second motion is calculated using a search technique, in which the plurality of corresponding points are evaluated where the first motion is used as an initial value.

9. (Currently Amended) ~~The method of claim 8,~~ A computer-implemented method of obtaining a motion of a mobile body on which a camera is mounted, using images of a surrounding of the mobile body captured by the camera, comprising:

a corresponding point calculation step of obtaining a plurality of corresponding points from two of the images having different capturing times;

a first motion calculation step of obtaining a first motion indicating the motion of the mobile body using the plurality of corresponding points, assuming a predetermined plane in the images; and

a second motion calculation step of obtaining a second motion indicating the motion of the mobile body using the first motion and the plurality of corresponding points,

wherein in the second motion calculation step, the second motion is calculated using a search technique, in which the plurality of corresponding points are evaluated where the first motion is used as an initial value,

wherein in the second motion calculation step, the evaluation is performed using a corresponding static point ratio which is a ratio of a corresponding static point or points.

10.   (Currently Amended)   The method of claim [[5]] 1, wherein the mobile body is a vehicle; and

in the second motion calculation step,

the partial corresponding point corresponding to the first motion and the plane expression indicating the plane are used instead of the first motion, and

the second motion is obtained using a search technique, in which the plurality of corresponding points are evaluated while inclining the plane around a center of an axle near the camera where the plane expression is used as an initial value.

11.   (Currently Amended)   The method of claim 1, A computer-implemented method of obtaining a motion of a mobile body on which a camera is mounted, using images of a surrounding of the mobile body captured by the camera, comprising:

a corresponding point calculation step of obtaining a plurality of corresponding points from two of the images having different capturing times;

a first motion calculation step of obtaining a first motion indicating the motion of the mobile body using the plurality of corresponding points, assuming a predetermined plane in the images; and

a second motion calculation step of obtaining a second motion indicating the motion of the mobile body using the first motion and the plurality of corresponding points,

wherein the mobile body has a non-steered wheel whose axle direction is fixed; and

in the first and second motion calculation steps, a vertical axis of a coordinate system for representing the motion of the mobile body is placed perpendicular to a straight line including the axle of the non-steered wheel, and a motion on a road surface of the mobile body is obtained as a circular arc movement around the vertical axis.

12.   (Original) The method of claim 11, wherein the vertical axis is placed passing through a central position of the non-steered wheel.

13.   (Cancelled)

14.   (Cancelled)